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CLAIMS

1. A method of controlling boiling level in an electric cooking assembly (2), the assembly comprising:

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a cooking plate (4) having a lower surface (10) in contact with which is supported an electric heater (12) and an upper surface (6) adapted to receive a cooking utensil (8) containing a material to be subjected to boiling on a heating zone (4A) overlying the electric heater;

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the electric heater incorporating at least one electric heating element (20) and a temperature-responsive device (30) arranged adjacent to the lower surface of the cooking plate and adapted to monitor temperature of the cooking utensil;

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the temperature-responsive device incorporating a temperature sensing element (38), having an electrical parameter which changes as a function of temperature, which is electrically connected to control means (28) for controlling energising of the electric heater from a power supply (24); and

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manual input selection means (106) associated with
the control means, whereby a plurality of
predetermined boiling levels are user-selectable for
the material in the cooking utensil,

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characterised by the steps of:

associating each predetermined boiling level with a
predetermined temperature sensed by the temperature
10 sensing element (38), the predetermined sensed
temperature being offset relative to an actual
temperature representative of each respective
boiling level; and

15 controlling the boiling level of the material in the
cooking utensil (8) by energising the heater (12) at
a corresponding power level.

2. A method according to claim 1, characterised in that
20 the predetermined sensed temperature is offset relative
to the actual temperature of each respective boiling
level by a different amount.

3. A method according to claim 1 or 2, characterised in
25 that the temperature-responsive device (30) is arranged

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substantially in contact with the lower surface (10) of the cooking plate (4).

4. A method according to claim 1, 2 or 3, characterised
5 in that the cooking plate (4) comprises glass-ceramic material.

5. A method according to any preceding claim,
characterised in that the temperature sensing element
10 (38) operates in closed loop manner with the control means (28), for controlling energising of the electric heater (12) from the power supply (24).

6. A method according to any preceding claim,
15 characterised in that means (62) is provided to shield the temperature sensing element (38) and a corresponding overlying region of the lower surface (10) of the cooking plate (4) from direct thermal radiation from the at least one electric heating element (20).

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7. A method according to claim 6, characterised in that the shielding means (62) comprises thermal insulation material.

25 8. A method according to any preceding claim, characterised in that the temperature-responsive device

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(30) is arranged adjacent to the lower surface (10) of the cooking plate (4) at a peripheral region of the heating zone (4A).

5 9. A method according to any preceding claim, characterised in that the temperature sensing element (38) comprises a material whose electrical resistance changes as a function of temperature.

10 10. A method according to claim 9, characterised in that the material is provided in film form on a supporting substrate (32).

11. A method according to claim 9 or 10, characterised
15 in that the material comprises platinum.

12. A method according to any preceding claim, characterised in that the control means (28) comprises microprocessor-based electronic circuitry.

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13. A method according to any preceding claim, characterised in that the predetermined boiling levels comprise a low or simmer boiling level, a medium boiling level and a high or rolling boiling level.

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14. A method according to claim 13, characterised in that the low or simmer boiling level is associated with a temperature sensed by the temperature sensing element (38) in a range of about 140 to about 190 degrees

5 Celsius.

15. A method according to claim 14, characterised in that the low or simmer boiling level is associated with a temperature sensed by the temperature sensing element

10 (38) of about 170 degrees Celsius.

16. A method according to any of claims 13 to 15, characterised in that the medium boiling level is associated with a temperature sensed by the temperature sensing element (38) in a range of about 160 to about 210 degrees Celsius.

17. A method according to claim 16, characterised in that the medium boiling level is associated with a temperature sensed by the temperature sensing element (38) of about 190 degrees Celsius.

18. A method according to any of claims 13 to 17, characterised in that the high or rolling boiling level is associated with a temperature sensed by the

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temperature sensing element (38) above about 210 degrees Celsius.

19. A method according to claim 18, characterised in
5 that the high or rolling boiling level is associated with
a temperature sensed by the temperature sensing element
(38) of about 220 degrees Celsius.

20. A method according to any of claims 13 to 19,
10 characterised in that selection of the high or rolling
boiling level results in operation of the heater (12) at
substantially full power.

21. A method according to any preceding claim,
15 characterised in that the manual input selection means
(106) comprises one or more switch means.